WHAT IS CLAIMED IS:

1. A piezoelectric filter comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

the upper electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the upper electrodes of the other piezoelectric resonators.

2. A piezoelectric filter comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

an additional film is provided on the upper electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the materials for the upper electrodes of the other piezoelectric resonators.

3. The piezoelectric filter according to Claim 2, wherein the upper electrodes of the plurality of piezoelectric resonators are made of the same material.

4. A piezoelectric filter comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

the vibration portions of the plurality of piezoelectric resonators are covered with a protective film, and an additional electrode is provided on the upper electrode of at least one of the plurality of piezoelectric resonators with the protective film being located therebetween.

5. The piezoelectric filter according to Claim 1, wherein the piezoelectric thin film includes one of ZnO and AlN.

6. The piezoelectric filter according to Claim 1, wherein the substrate has at least one of an opening and a concave portion, and the vibration portion is provided on the at least one of the opening and the concave portion.

7. A piezoelectric filter comprising:

a plurality of piezoelectric resonators including a piezoelectric substrate and a vibration portion having a structure in which the piezoelectric substrate is sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

the upper electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the upper electrodes of the other piezoelectric resonators.

8. A piezoelectric filter comprising:

a plurality of piezoelectric resonators including a piezoelectric substrate and a vibration portion having a structure in which the piezoelectric substrate is sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

an additional film is provided on the upper electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the material for the upper electrode.

9. The piezoelectric filter according to Claim 7, wherein the vibration portions of the plurality of piezoelectric resonators are covered with a protective film, and an additional electrode is provided on the upper electrode of at least one of the plurality of piezoelectric resonators with the protective film being located therebetween.

10. The piezoelectric filter according to Claim 7, wherein the lower electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the lower electrodes of the other piezoelectric resonators.

11. The piezoelectric filter according to Claim 7, wherein an additional film is provided on the lower electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the materials for the lower electrodes of the other piezoelectric resonators.

12. The piezoelectric filter according to Claim 7, wherein at least a portion of the plurality of piezoelectric resonators share a lower electrode.

13. The piezoelectric filter according to Claim 1, wherein the plurality of piezoelectric resonators are arranged in a ladder configuration.

14. A duplexer comprising the piezoelectric filter according to Claim 1.

15. A composite piezoelectric resonator comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

wherein the upper electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the upper electrodes of the other piezoelectric resonators.

16. A composite piezoelectric resonator comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

the upper electrodes of the plurality of piezoelectric resonators are made of the same material and an additional film is provided on the upper electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the materials for the upper electrodes of the other piezoelectric resonators.

17. A composite piezoelectric resonator comprising:

a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other; wherein

the vibration portions of the plurality of piezoelectric resonators are covered with a protective film, and an additional electrode is provided on the upper electrode of at least one of the plurality of piezoelectric resonators with the protective film being located therebetween.

18. The composite piezoelectric resonator according to Claim 15, wherein the piezoelectric thin film includes at least one of ZnO and AlN.

19. The composite piezoelectric resonator according to Claim 15, wherein the substrate has at least one of an opening and a concave portion, and the vibration portion is provided on the at least one of the opening and the concave portion.

20. A communication device comprising at least one of the piezoelectric filter according to Claim 1, the duplexer according to Claim 14, and the composite piezoelectric resonator according to Claim 15.

21. A method for adjusting the frequency of a piezoelectric filter comprising the steps of:

providing a piezoelectric filter including a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched

between at least a pair of an upper electrode and a lower electrode facing each other, the upper electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the upper electrodes of the other piezoelectric resonators; and

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching the upper electrode of the at least one of the plurality of piezoelectric resonators.

22. A method for adjusting the frequency of a piezoelectric filter comprising the steps of:

providing a piezoelectric filter including a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched between at least a pair of an upper electrode and a lower electrode facing each other, an additional film provided on the upper electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the material for the upper electrode; and

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching the additional film.

23. A method for adjusting the frequency of a piezoelectric filter comprising the steps of:

providing a piezoelectric filter including a plurality of piezoelectric resonators including a substrate and a vibration portion provided on the substrate, the vibration portion having a structure in which top and bottom surfaces of a thin film portion including at least one piezoelectric thin film are sandwiched

between at least a pair of an upper electrode and a lower electrode facing each other, the vibration portions of the plurality of piezoelectric resonators are covered with a protective film, and an additional electrode provided on the upper electrode of at least one of the plurality of piezoelectric resonators with the protective film being located therebetween; and

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching the additional electrode.

24. The method for adjusting the frequency of a piezoelectric filter according to Claim 21, further comprising the step of adjusting the frequency of the plurality of piezoelectric resonators by adding a film to the vibration portion or by etching the vibration portion through an opening in the substrate arranged such that the vibration portion is provided on the opening.

25. A method for adjusting the frequency of a piezoelectric filter comprising the steps of:

providing a piezoelectric filter including a plurality of piezoelectric resonators including a piezoelectric substrate and a vibration portion having a structure in which the piezoelectric substrate is sandwiched between at least a pair of an upper electrode and a lower electrode facing each other, the upper electrode of at least one of the plurality of piezoelectric resonators is made of a material having susceptibility to etching that is different from that of the upper electrodes of the other piezoelectric resonators; and

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching the upper electrode of the at least one of the plurality of piezoelectric resonators.

26. A method for adjusting the frequency of a piezoelectric filter comprising the steps of:

providing a piezoelectric filter including a plurality of piezoelectric resonators including a piezoelectric substrate and a vibration portion having a structure in which the piezoelectric substrate is sandwiched between at least a pair of an upper electrode and a lower electrode facing each other, an additional film provided on the upper electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the material for the upper electrode; and

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching the additional film.

27. The method for adjusting the frequency of a piezoelectric filter according to Claim 25, further comprising the step of adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching a lower electrode of the at least one of the plurality of piezoelectric resonators, the lower electrode being made of a material having susceptibility to etching that is different from that of the lower electrodes of the other piezoelectric resonators.

28. The method for adjusting the frequency of a piezoelectric filter according to Claim 25, further comprising the step of adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching an additional film of a lower electrode after the frequency of the upper electrode is adjusted, the additional film is provided on the lower electrode of at least one of the plurality of piezoelectric resonators, and the additional film has susceptibility to etching that is different from that of the materials for the lower electrodes of the other piezoelectric resonators.

29. The method for adjusting the frequency of a piezoelectric filter according to Claim 25, further comprising the step of

adjusting the frequency of the at least one of the plurality of piezoelectric resonators by etching a lower electrode after the frequency of the upper electrode is adjusted, the lower electrode being shared among at least a portion of the plurality of piezoelectric resonators.